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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/978,199	10/17/2001	Gregory P. Pogue	42202	4164

7590 06/28/2004  
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Washington, DC 20036

EXAMINER

HELMER, GEORGIA L

ART UNIT PAPER NUMBER

1638

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/978,199	<b>Applicant(s)</b> POGUE ET AL.	
	<b>Examiner</b> Georgia L. Helmer	<b>Art Unit</b> 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-10 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-10 and 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of the Claims***

1. The Office acknowledges receipt of Applicants Response; dated 16 October 2003.
2. Applicant has cancelled claims 1-4 and 11-32, and amended claims 5-10. New claim 33 has been added. Claims 5-10 and 33 are pending, and are examined in the instant action.
3. This action is made FINAL necessitated by Applicant's amendment.
4. All rejections not addressed below have been withdrawn.
5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102 (b)***

6. Claim 5 and 6 remain rejected under 35 U.S.C. 102 (b) as anticipated by Mirkov, et. al. US # 5,850,025, issued 15 December 1998. To the extent that this is a new rejection, it is necessitated by Applicant's amendment.

Mirkov teaches a recombinant RNA plant virus (col 11, lines 15-24) comprising bovine lysozyme (col 5, lines 1-23 and col 9, lines 12-23). The enzyme produced by Mirkov has the appropriate antigenic binding characteristics and size of the bovine

lysozyme (Figure 5). The lysozyme thus produced maintains biological activity, as conferring reduced susceptibility of the plants to bacterial infection (Example 6, col 35).

Accordingly Mirkov anticipates the claimed invention.

Applicant traverses, stating primarily (Response, p.7) that Mirkov does not teach a virus that does not integrate into the genome. Applicant's traversal has been considered and is unpersuasive. Mirkov clearly teach an STMV, non-integrating virus expressing lysozyme (column 11, lines 22-24).

### ***Claim Rejections - 35 USC § 103***

7. Claims 5-10 and 33 are rejected under 35 U.S.C. 103(a) as being obvious over Mirkov, et. al. US # 5,850,025, issued 15 December 1998, in view of Donson, et. al., US # 5,316,931, issued 31 May 1994, for reasons of record and for reasons discussed below. To the extent that this is a new rejection, it is necessitated by Applicant's amendment.

Mirkov teaches a recombinant RNA plant virus (col 11, lines 15-24) comprising bovine lysozyme (col 5, lines 1-23 and col 9, lines 12-23), which has a biological activity of conferring reduced susceptibility of plants to bacterial infection.

Mirkov does not teach a recombinant RNA molecule comprising a first viral subgenomic promoter, a second viral subgenomic promoter and a bovine lysozyme coding sequence under control of either the first or the second subgenomic promoter.

Donson teaches recombinant tobamoviruses (claims 9, 10, 33 and 34), and plant viral subgenomic promoters (col 4, lines 65 bridging to col 5, line 8) controlling non-native coding sequences. Donson teaches the value of using a recombinant virus comprising viral subgenomic promoters to express proteins to confer bacterial resistance to plants. Thus, Donson provides motivation to substitute the bovine lysozyme of Mirkov for the proteins of Donson (col 12, lines 23-40) for use in producing a plant with reduced susceptibility to bacterial infection. Therefore, it would be obvious to use the invention in plants.

Accordingly, Mirkov in view of Donson renders obvious the claimed invention.

Applicant traverses, stating primarily (Response, p.7) that in order to infect and replicate an RNA virus in a plant and have the foreign gene to be expressed, many events have to occur and are unpredictable, listing these events, saying they are unpredictable. Applicant's traversal has been considered and is unpersuasive. With respect to the allegedly inconsistent rejections under 35 U.S.C. 112 and 35 U. S. C. 103, the Examiner maintains that the test for adequacy of a prior art disclosure to anticipate or render claims obvious is not the same test as that for adequacy of a patent application disclosure to support claims under 35 U. S. C. 112, as taught In re Hafner, 161 USPQ 783, (CCPA 1969). Furthermore, Applicant's arguments are not commensurate in scope with the claims, which are claims drawn to products taught in the prior art of record.

**Remarks**

8. SEQ ID NO: 2 is known in the prior art.
9. No claim is allowed.
10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Georgia L. Helmer whose telephone number is 571-272-0796. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Any inquiry of a general

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nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance.

Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Georgia Helmer PhD  
Patent Examiner  
Art Group 1638  
June 17, 2004

  
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